

POWER PENTODE

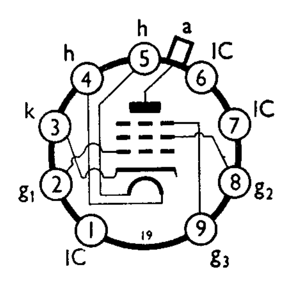
0·3A INDIRECTLY HEATED

N339

NOVEMBER, 1955

For use as a line time base output valve in D.C./A.C. television receivers.

BASE CONNECTIONS AND VALVE DIMENSIONS



View from underside of base.

Base : B9A
Bulb : Tubular

Overall length :	76—82	mm.
Seated length :	70—75	mm.
Max. diameter :	22	mm.
Top cap :	CT1	

HEATER

I_h	0·3	A
V_h	20 approx.	V

MAXIMUM RATINGS

V_{h-k} rms	230	V

Pentode Connection

V_a	300	V
v_a (pk) (pulse) *	7·5	kV
V_{g2}	200	V
p_a	12	W
p_{g2}†	4·5	W

Triode Connection

$V_{a, g2}$	200	V
$p_{a, g2}$	12·5	W

* Maximum pulse duration : 18% of one cycle, with a maximum of 18 μs.
† Subject to $p_a + p_{g2}$ not exceeding 12·5W.

CAPACITANCES (of unscreened valve).

$c_{a\text{-all less g1}}$	7·3	pF
$c_{g1\text{-all less a}}$	13	pF
$c_{a\text{-g1}}$	0·38	pF

TYPICAL OPERATION

Pentode Connection

V_a	150	V
V_{g2}	150	V
I_a	50	mA
r_a	30	kΩ
g_m	8·5	mA/V

Triode Connection

$V_{a, g2}$	150	V
V_{g1}	−12·5	V
μ	8·5	
r_a	810	Ω
g_m	10·5	mA/V

SCREENING

No internal or external screening is fitted to the valve.

MOUNTING

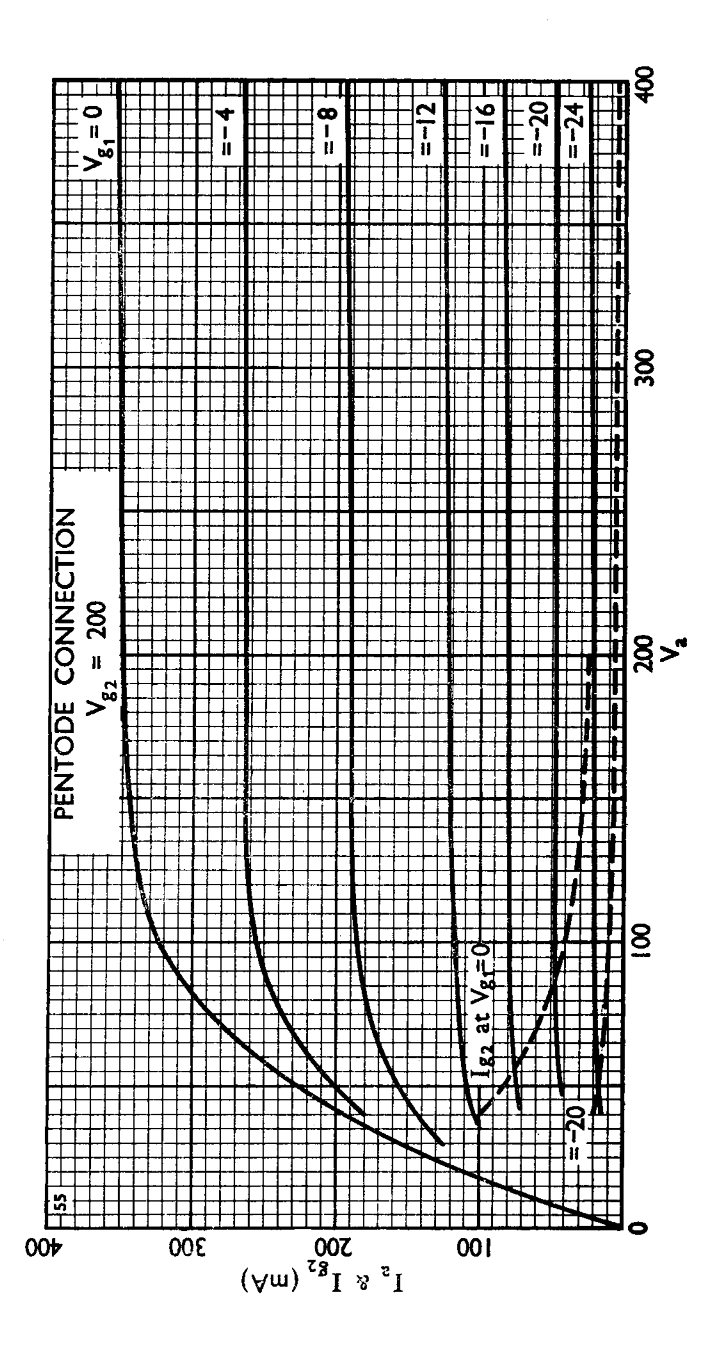
Any position, provided pins 1 and 6 are in a vertical plane when the valve is horizontal.

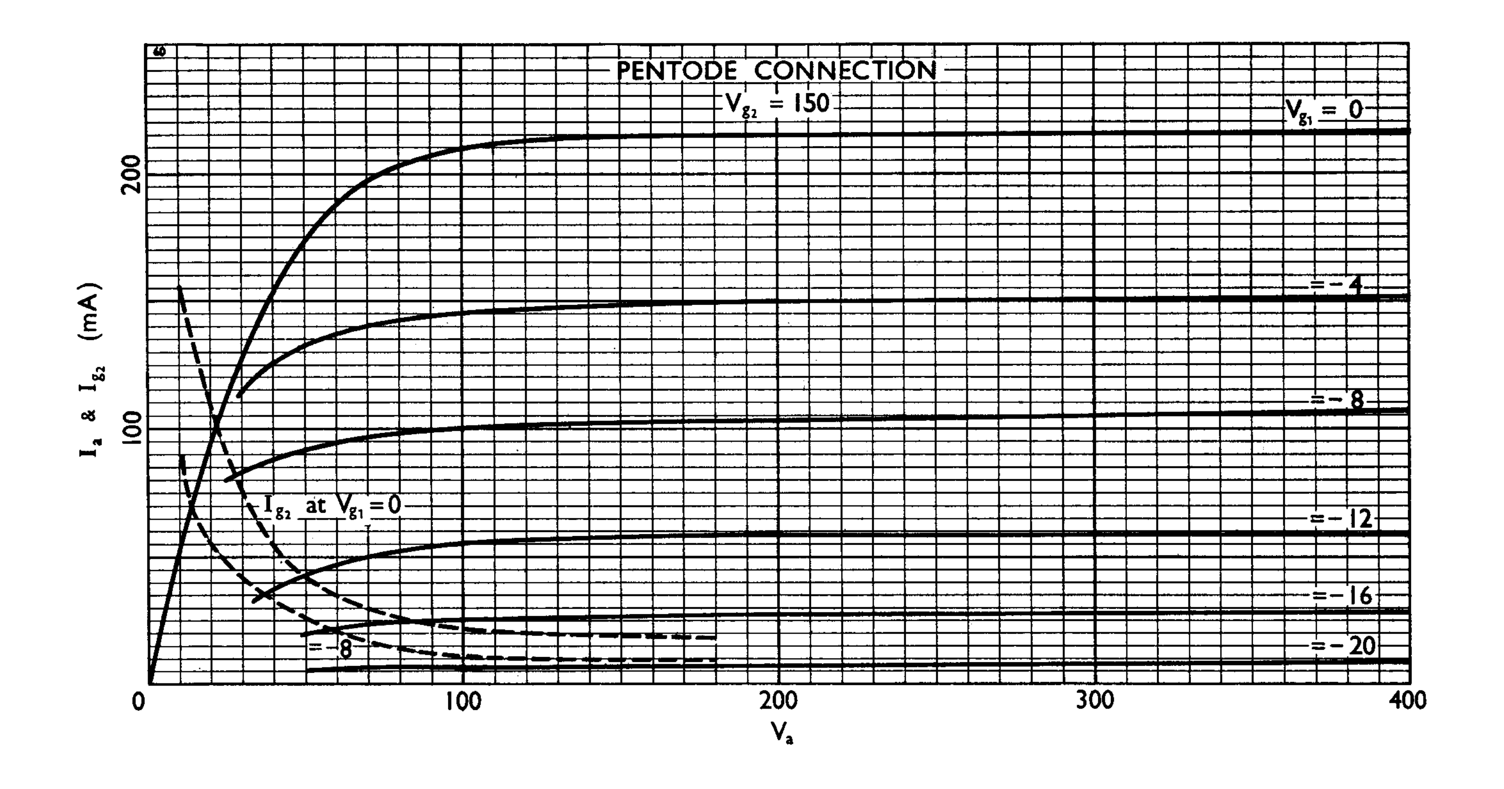
RETAINING

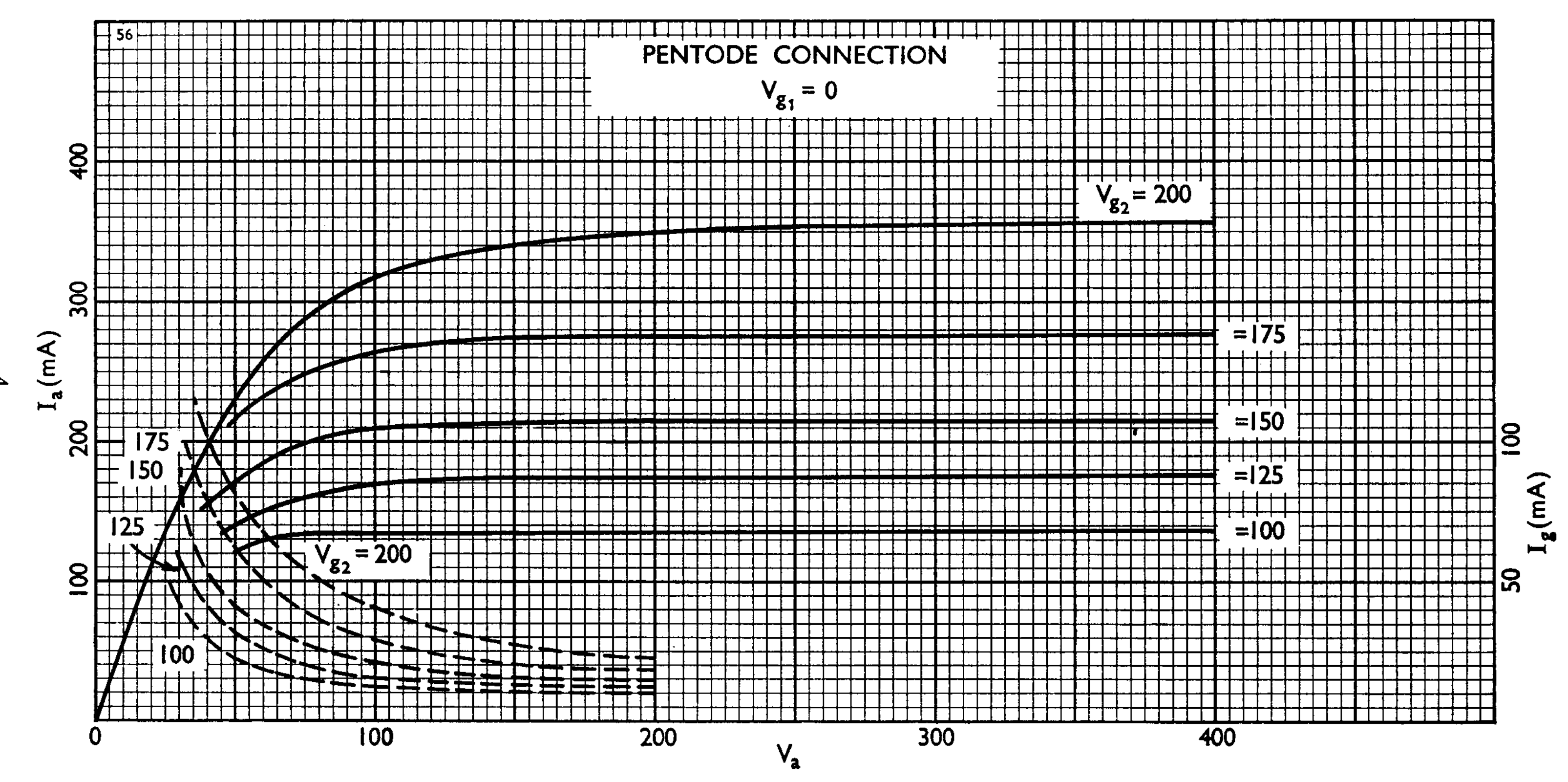
A retaining device should be used in equipment subject to vibration or shock.

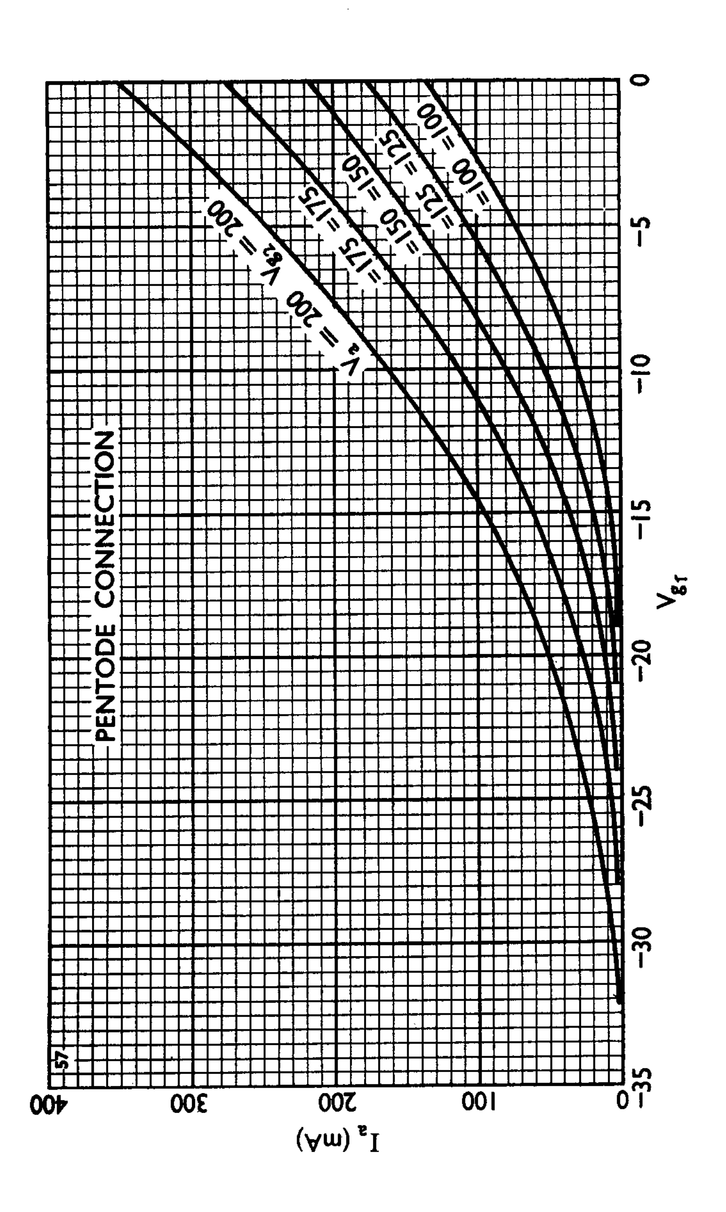
VENTILATION

Free air circulation is preferable. The temperature of the hottest part of the bulb must not exceed 200°C.

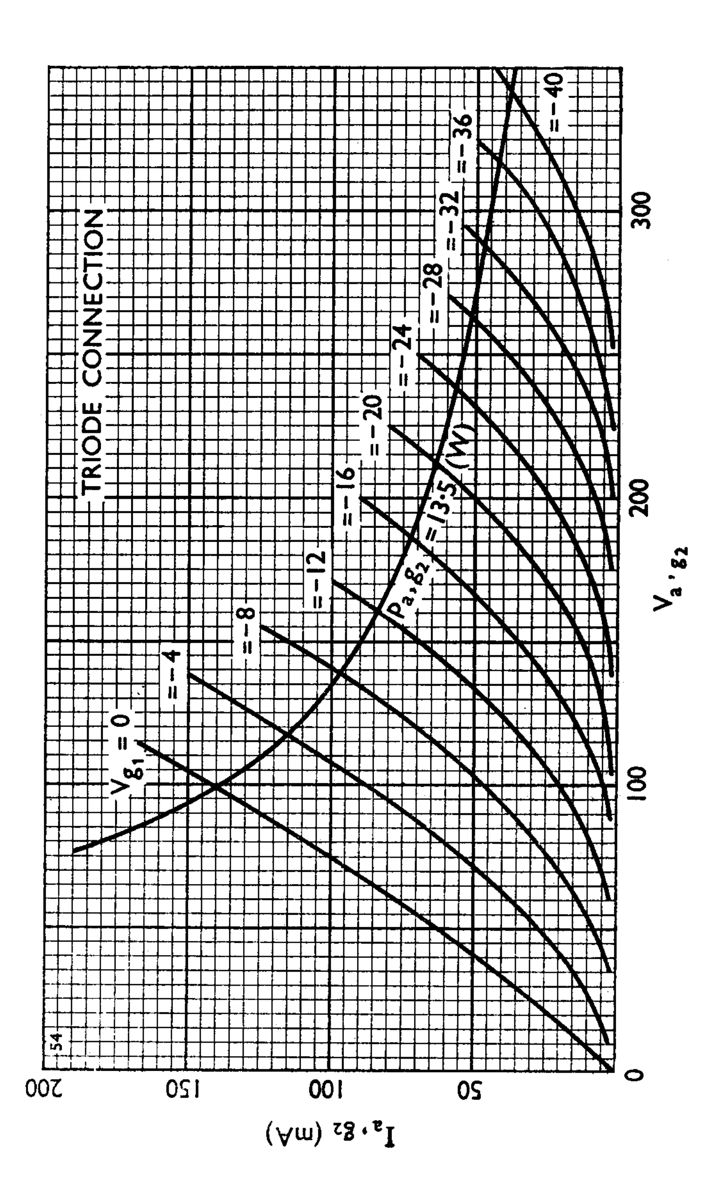

PENTODE CONNECTION
V_{g2} = 200
V_{g1} = 0
= −4
= −8
= −12
= −16
= −20
= −24
I_{g2} at V_{g1}=0
= −20
V_a
I_a & I_{g2} (mA)
0
100
200
300
400
55


PENTODE CONNECTION
Vg2 = 150
Vg1 = 0
= -4
= -8
= -12
= -16
= -20
Ig2 at Vg1 = 0
= -8
0
100
200
300
400
Va
100
200
Ia & Ig2 (mA)

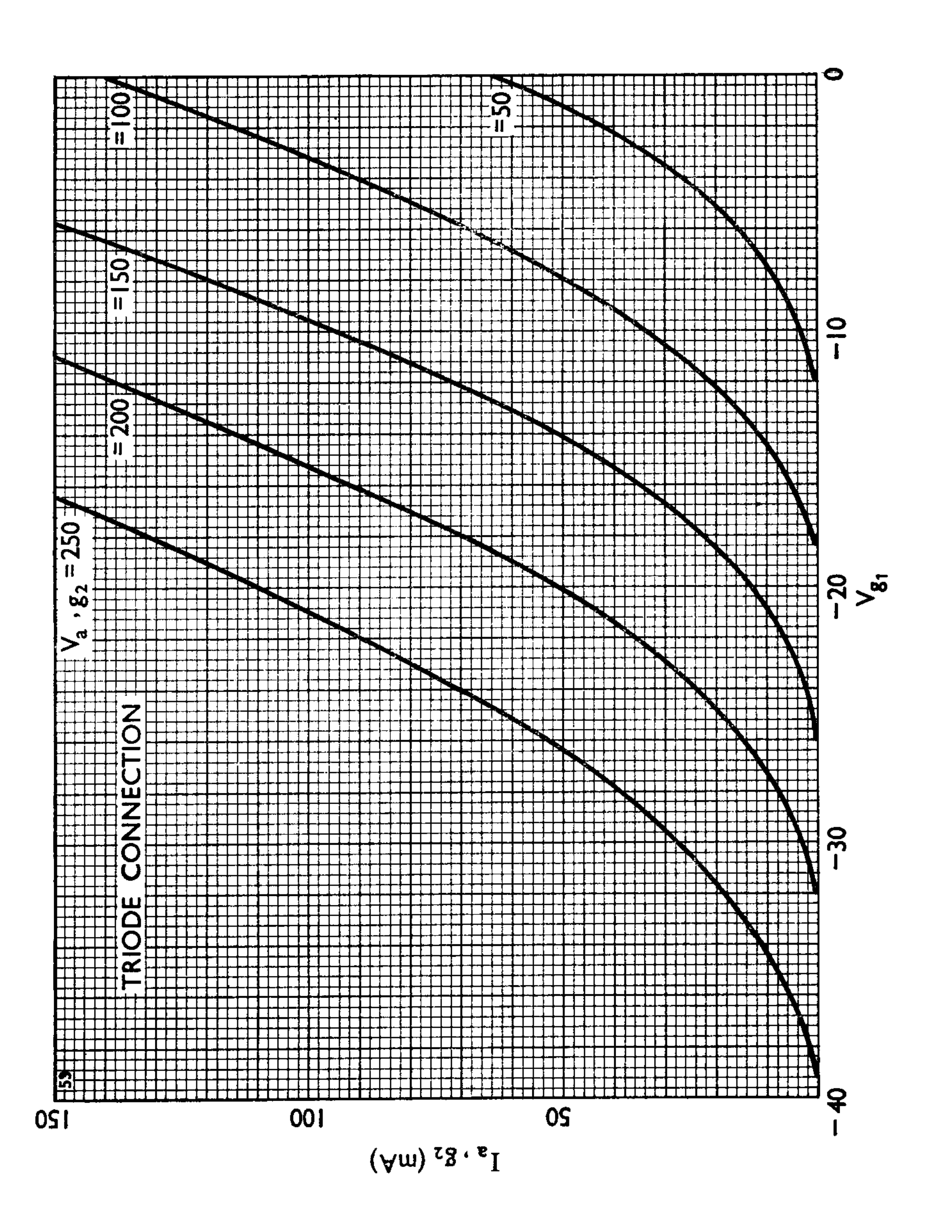

PENTODE CONNECTION
Vg1 = 0
Vg2 = 200
=175
=150
=125
=100
Vg2 = 200
175
150
125
100
Ia (mA)
Ig (mA)
Va
0
100
200
300
400
50
100
56


PENTODE CONNECTION
Va = 200 Vg2 = 200
=175 =175
=150 =150
=125 =125
=100 =100
Ia (mA)
Vg1
0
100
200
300
400
0
−5
−10
−15
−20
−25
−30
−35
57

N339



TRIODE CONNECTION
$V_{g_1} = 0$
= −4
= −8
= −12
= −16
= −20
= −24
= −28
= −32
= −36
= −40
$P_{a,g_2} = 13{\cdot}5$ (W)
V_{a,g_2}
I_{a,g_2} (mA)
0
50
100
150
200
100
200
300
54


TRIODE CONNECTION
$V_{a,g_2}=250$
=200
=150
=100
=50
I_{a+g_2} (mA)
V_{g_1}
150
100
50
0
−40
−30
−20
−10
0

N339

OV.1689

Printed in England. C.